A Snapshot of Esophageal Cancer

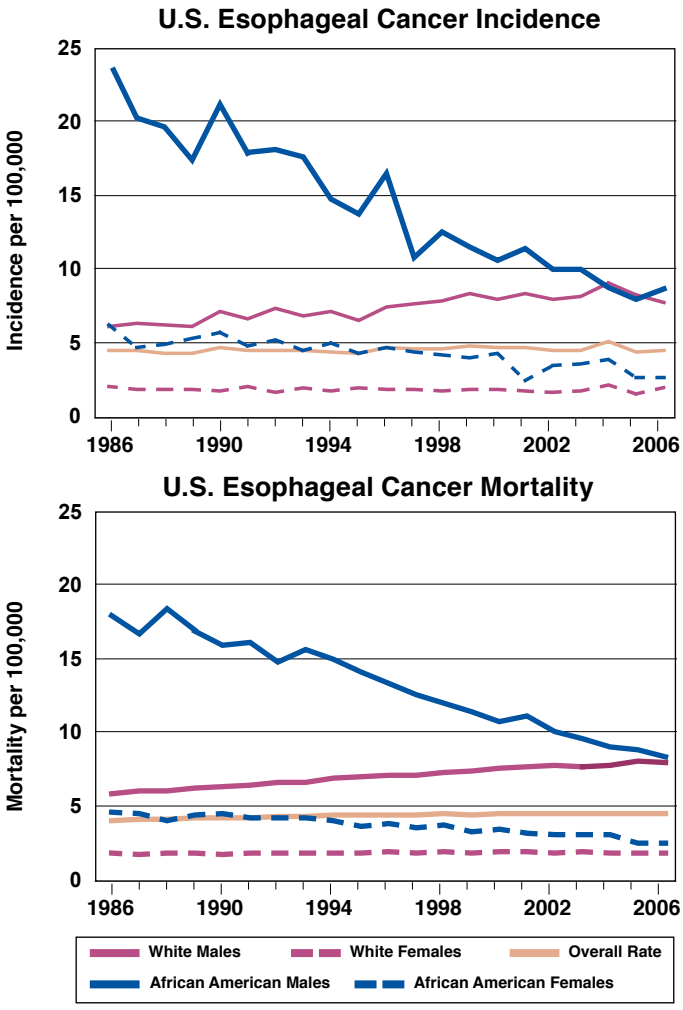
Incidence and Mortality Rate Trends

The incidence and mortality rates for esophageal cancer in the United States are very similar. Regardless of race or ethnicity, men have higher incidence and mortality rates than women. The esophageal cancer mortality rates for African Americans are higher than the rates for whites, but the incidence and death rates for African Americans have steadily declined over the past two decades. This downward trend is not observed for other racial or ethnic groups.

It is estimated that approximately $800 million[1] is spent in the United States each year on treatment of esophageal cancer.

Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at http://seer.cancer.gov/.

[1]Cancer Trends Progress Report (http://progressreport.cancer.gov), in 2004 dollars, based on methods described in *Medical Care* 2002 Aug;40(8 Suppl):IV-104–17.

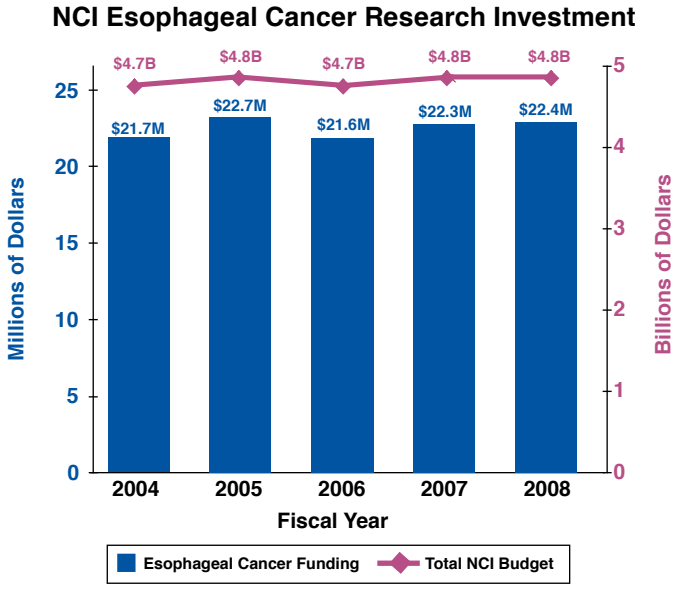


Trends in NCI Funding for Esophageal Cancer Research

The National Cancer Institute's (NCI) investment[2] in esophageal cancer research increased from $21.7 million in fiscal year 2004 to $22.4 million in fiscal year 2008.

Source: NCI Office of Budget and Finance (http://obf.cancer.gov).

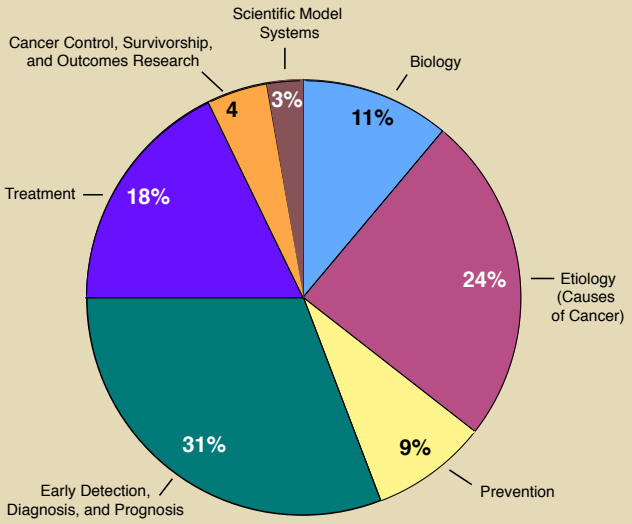
[2]The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research planning and budgeting at the National Institutes of Health (NIH), see http://www.nih.gov/about/.



Examples of NCI Activities Relevant to Esophageal Cancer

- The **Prevention Agents Program** provides scientific and administrative oversight for chemoprevention agent development from preclinical research to early Phase I studies. The program is currently supporting research on several agents for potential chemoprevention of esophageal cancer. http://prevention.cancer.gov/programs-resources/groups/cad/programs/agents
- The interdisciplinary scientists of the **Network for Translational Research: Optical Imaging (NTROI)** are accelerating translational research in optical imaging and/or spectroscopy. Current efforts include the development of techniques to identify molecular markers for detecting esophageal neoplasia and understanding basic disease mechanisms. http://imaging.cancer.gov/programsandresources/specializedinitiatives/ntroi/print
- The **Asian Barrett Consortium (ABC)**, modeled after the successful **Barrett Esophagus and Esophageal Adenocarcinoma Consortium (BEACON)**, was formed to enhance international collaborations in research into the initiating factors for Barrett esophagus and esophageal adenocarcinoma. http://dceg.cancer.gov/newsletter/nov08/article_08_EsophagealDiseasesConsortium.shtml
- The **Stomach/Esophageal Cancers Progress Review Group (PRG)**, a panel of prominent scientists and patient advocates, assessed the state of the science and identified future research priorities for stomach and esophageal cancers. http://planning.cancer.gov/library/stomach_esophageal.pdf

NCI Esophageal Cancer Research Portfolio



Percentage of Total Dollars by Scientific Area
Fiscal Year 2008

Data sources: NCI's Division of Extramural Activities and the NCI Funded Research Portfolio. Only projects with assigned scientific area codes are included. A description of relevant research projects can be found on the NCI Funded Research Portfolio website at http://fundedresearch.cancer.gov

- The **What You Need to Know About™ Cancer of the Esophagus** booklet contains information on diagnosis and staging, treatment, supportive care and nutrition, and taking part in research studies related to cancer of the esophagus. Information specialists can also answer questions about cancer at 1-800-4-CANCER. http://www.cancer.gov/cancertopics/wyntk/esophagus
- The **Esophageal Cancer Home Page** provides up-to-date information on esophageal cancer treatment, prevention, genetics, causes, screening, testing, and other topics. http://cancer.gov/cancerinfo/types/esophageal

Selected Advances in Esophageal Cancer Research

- A phase III randomized trial is studying whether **adding a targeted biologic agent (cetuximab) to chemoradiotherapy** improves response rate and survival of patients with locally advanced esophageal cancer. http://www.cancer.gov/ncicancerbulletin/051909/page7
- **Preoperative chemoradiotherapy** may be an acceptable option for appropriately selected elderly esophageal cancer patients. http://www.ncbi.nlm.nih.gov/pubmed/19289262
- Researchers found that **higher intake of meats (particularly red meat) and lower intake of vegetables** is associated with an increased risk of esophageal carcinoma. http://www.ncbi.nlm.nih.gov/pubmed/18537156
- **Mutations in the p53 protein** are associated with a 2-fold increased risk of death from all esophageal cancers, whereas mutations in the **MDM2 protein** are associated with a 7-fold increased risk of death from squamous cell cancer of the esophagus. http://www.ncbi.nlm.nih.gov/pubmed/19383811